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A Continuous Reading Electro-Titration Apparatus

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pected that Fe_3C should also be metastable at a pressure of one atmosphere unless the added pressure of the gases lowers the activity of the Fe and C to such an extent as to change the Fe_3C from a stable to a metastable state.

IOWA STATE COLLEGE,
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A CONTINUOUS READING ELECTRO-TITRATION APPARATUS

STEPHEN POPOFF AND J. HILDEBRAND

(*ABSTRACT*)

Goode's Single radio tube electro-titration set up was modified so as to give greater sensitivity. In place of the galvanometer a microammeter reading to 750 microamperes is used in the circuit.

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THE DISSOCIATION OF SOME ORGANIC AND INOR- GANIC SUBSTANCES AT HIGH TEMPERATURES

GLADYS M. WOODS AND THOS. C. POULTER

(*ABSTRACT*)

The following investigation was undertaken to ascertain whether the well known conductivity in many gaseous reactions at high temperatures is due entirely to the reaction or due partially to the dissociation of one or the other or both of the constituents into charged particles.

For the experimental work, a tube 150 mm. long and 15 mm. in diameter containing one platinum and one tungsten electrode was used. The electrodes were of wire and overlapped about 25 mm. and were about three mm. apart. This tube was heated to approximately 500 degrees, this being measured by a pyrometer.

A gentle stream of vapor of the following substances were passed through the tube at atmospheric pressure. A potential of from one to fifteen volts was applied to the electrodes and the current was read by means of a current galvanometer of sensitivity 0.021 microamperes per millimeter division.

The following substances showed a deflection ranging from one to fifteen scale divisions.